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## REMARKS/ARGUMENTS

This is in response to the Office Action mailed January 10, 2007, with claims 1-22 pending in the application. By this reply to the Office Action, claims 14 – 16 have been canceled. No new matter has been added. Claims 1-13 and 17-22 remain in consideration.

### Interview Summary

The applicant's attorney conducted an interview via telephone with the examiner on 05 February 2007. The substance of the interview included discussing the Office Action, including identifying support in the specification for the claim amendments which were the subject of the rejection under 35 U.S.C. §112, and more complete understanding of the claim rejections under 35 U.S.C. §103(a), discussed hereinbelow. No agreement was reached, and this response to the Office Action clarifies and documents the Applicant's attorney's comments and provides additional support to the Applicant's arguments distinguishing the instant invention from the cited art.

### Claim Rejections – 35 U.S.C. § 112

The office action rejected claims 1-13 and 17-22 under 35 U.S.C. § 112 ¶1 as having failed to comply with the written description requirement. It was stated that the claims contain subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the art that the inventors, at the time the application was filed, had possession of the claimed invention. Specifically, it was stated that the claim feature 'a brake actuation module having a direct signal line to each of the first and second supervisory controllers and the monitoring controller', which was recited in claims 1 and 17, was not described in the specification in such a way as to reasonably convey to one skilled in the art that the inventors, at the time the application was filed, had possession of the claimed invention.

Applicant respectfully traverses this rejection. The standard for whether a claim finds support in a specification has been articulated by the Federal Circuit:

> Although [the applicant] does not have to describe exactly the subject matter claimed, . . . the description must clearly allow persons of ordinary skill in the

> art to recognize that [he or she] invented what is claimed. *See* Vas-Cath, 935 F.2d 1555 (citations omitted).

Furthermore, the possession test requires assessment from the viewpoint of one of skill in the art. *See*, Moba V.B. v. Diamond Automatic, Inc., 325 F.3d 1306 (Fed. Cir. 2003).

Applicant refers to the following language in the specification which supports the claim language:

> "Brake actuation module 160 is operatively connected to a signal line which is also operatively connected to each of controllers 120,122,123, such that brake actuation module 160 is in signal communication and adapted to provide processed brake signal 162 to each of controllers 120,122,123." (*See* Para. 0015 on pp. 5, 6).

and,

> "It is preferred that the signal communication of both processed sensor signal 162 and raw sensor signals 164,166,168 be provided using hard-wire connections as opposed to a brake control bus or buses." (*See*, Para. 0023, on page 12).

Applicant respectfully asserts that one having ordinary skill in the art would understand that the claim language 'having a direct signal line' is supported in the specification, in Paras. 0015 and 0023 (quoted above) and as depicted by line 162 in Fig. 3, which connects output of the brake actuation module 160 to each of the controllers 120, 122, and, 123. Therefore, applicant requests withdrawal of the rejection under 35 U.S.C. § 112, ¶1, and a review of the claims 1-13 and 17-22 as previously amended, on their merits.

The office action rejected claims 14-16 under 35 U.S.C. §112 ¶2 as being indefinite for failing to particularly point out and distinctly claim the subject matter which the applicants regard as the invention.

Claims 14-16 have been canceled in order to place this application in condition for allowance, and not for reasons of patentability.

**Claim Rejections 35 U.S.C. § 103(a)**

Claims 1-12, 14, 17, and 20-22 were rejected under 35 U.S.C. §103(a) as being unpatentable over applicant's Figure 1 in view of *Kato*, et al. USPN 5,548,601. Claims 13, 15, 16, 18, and 19 were rejected under 35 U.S.C. §103(a) as being unpatentable over applicant's Figure 1 in view of *Kato*, et al. '601 and further in view of *Weiberle*, et al. U.S.

2003/0006726 A1.

Previously presented claim 1 sets forth a brake control system, comprising, *inter alia*, a first supervisory controller, a second supervisory controller, and a monitoring controller operatively connected a controller bus and adapted to monitor the performance of said first supervisory controller, said second supervisory controller, said first brake control bus, and said second brake control bus. A brake actuation module has a direct signal line to each of the first and second supervisory controllers and the monitoring controller. Support for this claim language is found in the specification in Paras. 0015 and 0023, as discussed hereinabove.

Applicant respectfully asserts that the instant invention of claim 1 is patentably distinguishable from *Kato*, et al. and applicant's Figure 1 because all elements of the invention are NOT disclosed in the prior art, as required under 35 U.S.C. § 102 and §103(a). Specifically neither reference teaches or describes a brake actuation module having a direct signal line to each of the first and second supervisory controllers AND the monitoring controller.

The office action cited *Kato*, et al. to teach the concept of a monitoring controller 80, 85. *Kato*, et al. teaches two control units CPU1 and CPU2 having dummy output terminals Td1 and Td2 which are input to a watchdog circuit 85 and a dummy output comparator 80 (*See*, Col. 6, Lines 46-55, and Fig. 5). The dummy output comparator 80 detects a failure in the CPU1 and/or CPU2 when an exclusive OR circuit detects a disparity between the two dummy outputs. (*See*, Col. 7, Lines 27-33). The watchdog circuit 85 monitors processing times of the CPU1 and the CPU2. (*See*, Col. 7, Lines 40, et seq.). *Kato* neither teaches nor describes the purported monitoring controller of, i.e., the watchdog circuit 80 and the dummy output comparator 85, having as an input a direct signal line from a brake actuation module, as described above with respect to claim 1 of the instant invention.

Thus, claim 1 is distinguishable over the cited prior art, and therefore allowable.

Claims 2-12 all depend from independent claim 1, and claim additional limitations thereto, and are therefore allowable.

Previously presented claim 17 sets forth a brake control system, comprising, *inter alia*, a first supervisory controller, a second supervisory controller, and a monitoring controller operatively connected a controller bus and adapted to monitor the performance of said first supervisory controller, said second supervisory controller, said first brake control bus, and said second brake control bus. A brake actuation module has a direct signal line to each of the first and second supervisory controllers and the monitoring controller, and, the first and second supervisory controllers and the monitoring controller comprise substantially identically constructed control modules. Support for this claim language is found in the specification in Paras. 0015, 0018 and 0023, as discussed hereinabove. Specifically, with reference to the claim language of 'the first and second supervisory controllers and the monitoring controller comprise substantially identically constructed control modules, it is stated in Para 0018 that:

> Controllers 120,122,123 are preferably substantially identical in construction with respect to their associated control hardware and components, however, they may implement somewhat different control algorithms, for example, to provide a distinction between the application of the front and rear brakes in the case of supervisory controllers 120,122, respectively, and to provide the system and controller monitoring function in the case of monitoring controller 123.

Applicant respectfully asserts that the instant invention of claim 17 is patentably distinguishable from *Kato*, et al. and applicant's Figure 1 because all elements of the invention are NOT disclosed in the prior art, as required under 35 U.S.C. § 102 and §103(a).

The office action cited *Kato*, et al. to teach the concept of a monitoring controller 80, 85. *Kato*, et al. teaches two control units CPU1 and CPU2 having dummy output terminals Td1 and Td2 which are input to a watchdog circuit 85 and a dummy output comparator 80 (*See*, Col. 6, Lines 46-55, and Fig. 5). The dummy output comparator 80 detects a failure in the CPU1 and/or CPU2 when an exclusive OR circuit detects a disparity between the two dummy outputs. (*See*, Col. 7, Lines 27-33). The watchdog circuit 85 monitors processing times of the CPU1 and the CPU2. (*See*, Col. 7, Lines 40, et seq.). *Kato* neither teaches nor describes the purported monitoring controller of, i.e., the

watchdog circuit 80 and the dummy output comparator 85, having as an input a direct signal line from a brake actuation module, as described above with respect to claim 17 of the instant invention. Furthermore, *Kato* neither teaches nor describes the purported monitoring controller of, i.e., the watchdog circuit 80 and the dummy output comparator 85 comprising a control module that is substantially identical in construction to the CPU1 and the CPU2 as described above with respect to claim 17 of the instant invention.

Thus, newly amended claim 17 is distinguishable over the cited prior art, and therefore allowable.

Claims 20-22 all depend from independent claim 17, and claim additional limitations thereto, and are therefore allowable.

Claims 13, 15, 16, 18, and 19 were rejected under 35 U.S.C. §103(a) as being unpatentable over applicant's Figure 1 in view of *Kato*, et al. '601 and further in view of *Weiberle*, et al. U.S. 2003/0006726 A1. Applicant respectfully traverses the Office Action's rejection of claim 13, over applicant's Figure 1 in view of *Kato*, et al. '601 and further in view of *Weiberle*, et al. U.S. 2003/0006726 A1. Claim 13, dependent upon now allowable claim 1, further claims the brake control system, comprising, *inter alia*, first, second, and third brake sensors, adapted to sense an operator input and provide first, second, and third unprocessed brake signals. The first supervisory controller is adapted to receive the first unprocessed brake signal and the processed brake signal and is adapted to control said first brake control unit pair in response thereto. The second supervisory controller is adapted to receive the second unprocessed brake signal and the processed brake signal and is adapted to control said second brake control unit pair in response thereto. The monitoring controller is adapted to receive the third unprocessed brake signal and the processed brake signal.

Applicant respectfully asserts that claim 13 is distinguishable over the prior art cited thereagainst, because the prior art, alone and in combination, fails to teach or describe the above elements of claim 13. *Weiberle* teaches an electrical brake system for a motor vehicle, including control module PM and axle control modules AMVA and AMHA or wheel modules RM1 and RM2 which communicate via communications system K, for

controlling electro-mechanical or electro-hydraulic brake actuators. For determination of the driver's command, sensors S1. . . Sn provide signal outputs from brake pedal BP to one of the control modules, to form the driver's operating braking command. (*See*, Para. 0028). This is depicted in each of Figs. 4, 5, and 6 with the controller labcled as 'AMVAPM'.

Applicant asserts that *Weiberle* neither teaches nor describes the first supervisory controller adapted to receive the first unprocessed brake signal and the processed brake signal and adapted to control said first brake control unit pair in response thereto, or the second supervisory controller adapted to receive the second unprocessed brake signal and the processed brake signal and adapted to control said second brake control unit pair in response thereto, or the monitoring controller adapted to receive the third unprocessed brake signal and the processed brake signal.

Thus, claim 13 is patentably distinguishable over the cited art, and therefore allowable.

Claims 15, 16, 18, and 19 all depend from one of now allowable claims 1, 14, or 17, and claim additional limitations thereto, and are therefore allowable.

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## CONCLUSION

For at least all of the above, applicant respectfully requests withdrawal of the final rejection of claims 1-13 and 17-22 and reconsideration of the claims on their merits.

Furthermore, applicant respectfully asserts that claims 1-13 and 17-22 are allowable over the cited prior art, as described in detail hereinabove. Therefore, applicant respectfully requests a Notice of Allowability.

If the Examiner has any questions regarding the contents of the present response, the Applicant's attorney can be contacted at the telephone number appearing below.

Respectfully submitted,

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